National Strategy Against Cancer

Overview of the programme for strengthening oncological health services research

For five years, the Swiss Cancer Research foundation's Health Services Research in Oncology and Cancer Care programme provides approximately one million francs annually in funding for projects in health services research. Three funding rounds are complete, and the fourth is underway. The last opportunity for researchers to submit convincing research proposals is in 2020.

The health care system faces great challenges, among them the growing need for economic and also personnel resources. To avoid underprovision, overprovision, and misprovision and to ensure good health services provision in the long term, present-day processes in the health care system have to be analysed and new concepts developed. Health services research makes a significant contribution here. It studies how people are provided with health products and services, focusing mainly on the quality, benefits, and costs of medical care. Care refers not only to patients but to the entire healthy population as well, such as in the area of prevention.

Health services research differs in this way from basic research and clinical research. Basic biomedical research is often called the first pillar and produces new findings on biological processes using cell cultures, tissue, and animal models. Clinical research is called the second pillar; it studies the effectiveness of treatments in clearly defined and selected groups of patients. Following this logic, health services research can be called the third pillar of health research (Figure 1).

The findings of health services research are intended to serve patients, service providers, and decision makers in the government and the economy and to make a significant contribution towards needed restructuring and further development of the health care system. Researchers in the field differentiate three different levels: the macro, meso-, and microlevel. Research at the microlevel focuses on individual interactions between service providers and recipients. Research at the mesolevel analyses the organization and delivery of health services and products under everyday conditions. The macrolevel analyses the health care system at the regional, national, and international level; for this, the data analysed are usually already available, highly aggregated data. But for studies at the meso- and microlevel, researchers do not only use already existing data and instead generate data themselves.

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In Switzerland, the Swiss Academy of Medical Sciences (SAMS) together with the Gottfried and Julia Bangerter-Rhyner foundation undertook first efforts to strengthen health services research in 2012 and launched a five-year research funding programme. Since 2015, the Swiss National Science Foundation is promoting research projects in the framework of the's National Research Programme 'Smarter Health Care' (NRP 74). However, neither of these two funding programmes has a primary focus on oncology. For this reason, the Swiss Cancer Research foundation (SCR), with financial support from the Accentus Foundation (Marlies-Engeler-Fonds), launched a research programme that is incorporated in the National Strategy Against Cancer 2014–2020 and that funds studies in health services research in oncology. Since 2016, each year the programme has funded up to four larger research projects (funding up to 250 000 francs) and several smaller pilot projects (funding up to 75 000 francs). The funding programme aims to point up the need for improvement in service provision to people with cancer and to help to meet the challenges in the area of oncology.

Figure 1
Position of health services research in the research landscape in medicine and health care system

The three-pillar model (taken from: Schweizerische Akademie der Medizinischen Wissenschaften. Stärkung der Versorgungsforschung in der Schweiz. *Swiss Academies Reports*. 2014;9).

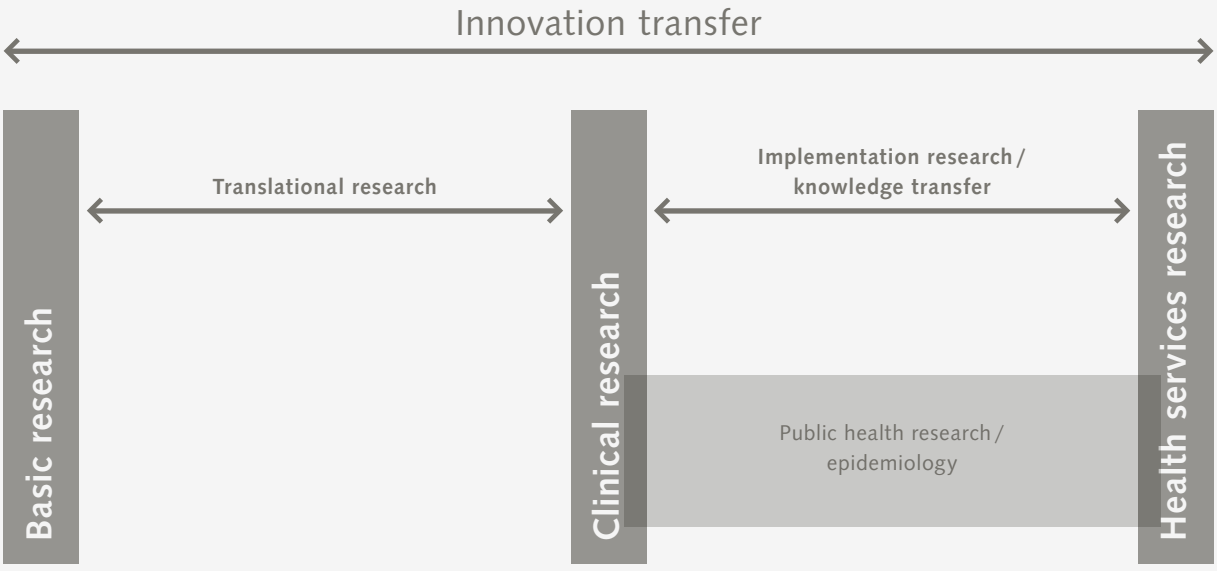


Table 1
The 22 health services research projects funded up to now

Topic of the research project	Organizations involved	Disciplines involved
1 Continuity of care in patients with cancer in Switzerland	Health insurance	Public health
2 Effect of adherence to guidelines on healthcare provision for patients with myelodysplastic syndrome in Switzerland	Hospital University	Haematology Public health
3 Mammography screening programmes and demographic and socioeconomic inequalities in utilization of screenings	Hospital University	Socioeconomics Sociology General internal medicine
4 Need for psychosocial aftercare of childhood cancer survivors	University	Public health Psychology
5 Evaluation of quality of care for young women with breast cancer in Switzerland	Hospital Cancer registry	Public health Gynaecology Medical oncology
6 Optimization of targeted cancer therapies: for better self-management by the patient	Hospital	Clinical pharmacology Pharmaceutics Medical oncology
7 Security problems in the utilization of information technologies in care for patients with cancer	Foundation	Quality management
8 Changes in rates of colon cancer screening from 2012 to 2017 in Switzerland	Hospital Health insurance University	General practice / family medicine General internal medicine Public health
9 Social media use in adolescents and young adults during and after cancer: views of patients and views of oncologists	University	Bioethics and medical ethics
10 Development and testing of a healthcare provision model for promoting self-management with allogeneic stem cell transplantation	University Hospital Higher education institution	Public health Nursing science Haematology General internal medicine Computer science Biostatistics
11 Comparison of two tumour aftercare strategies for patients with treated oral, throat, and laryngeal cancer	University Hospital	Oral and maxillofacial surgery Radiation oncology Radiology Biostatistics
12 Experience of patients with cancer with treatment and care: a multicentre cross-sectional study in the French-speaking part of Switzerland	University Hospital	Public health Nursing science

Topic of the research project	Organizations involved	Disciplines involved
13 Aftercare for childhood cancer survivors in Switzerland	University Hospital	Paediatric oncology-haematology Public health
14 Can an exercise training programme during chemotherapy reduce the undesirable side effects on heart function in patients with breast cancer?	Hospital	Cardiology Medical oncology
15 Differences in the use of radiation therapy in women whose entire breast was removed due to breast cancer	Hospital Cancer registry	Radiation oncology Public health
16 Better identification of psychological stress in patients with cancer using a mobile phone app	Hospital	Medical oncology Psychology
17 Individual prediction of progression risk in patients with chronic lymphocytic leukaemia at an early stage	Hospital	Haematology
18 Burden on patients with cancer and their families from the cost of proton therapy	Research institute Hospital	Radiation oncology Public health
19 Is it cost effective to test every patient with breast cancer for hereditary breast cancer?	Hospital University	Gynaecology Medical oncology Nursing science Medical genetics Economics Biostatistics
20 What is the association between case numbers of abdominal surgery for cancer and the treatment results?	Health insurance	Public health
21 Clinical benefit, pricing, and cost coverage of oncology medications: a comparative study of Switzerland, England, Germany, France, and the United States	Hospital	General practice / family medicine Medical oncology Health law
22 Health economic analyses of postoperative treatment of stage 0 cancer/precancerous breast lesions	Hospital University	Radiation oncology Gynaecology Economics

Macrolevel Health care system
Mesolevel Institutions providing health services
Microlevel Interactions between providers and recipients

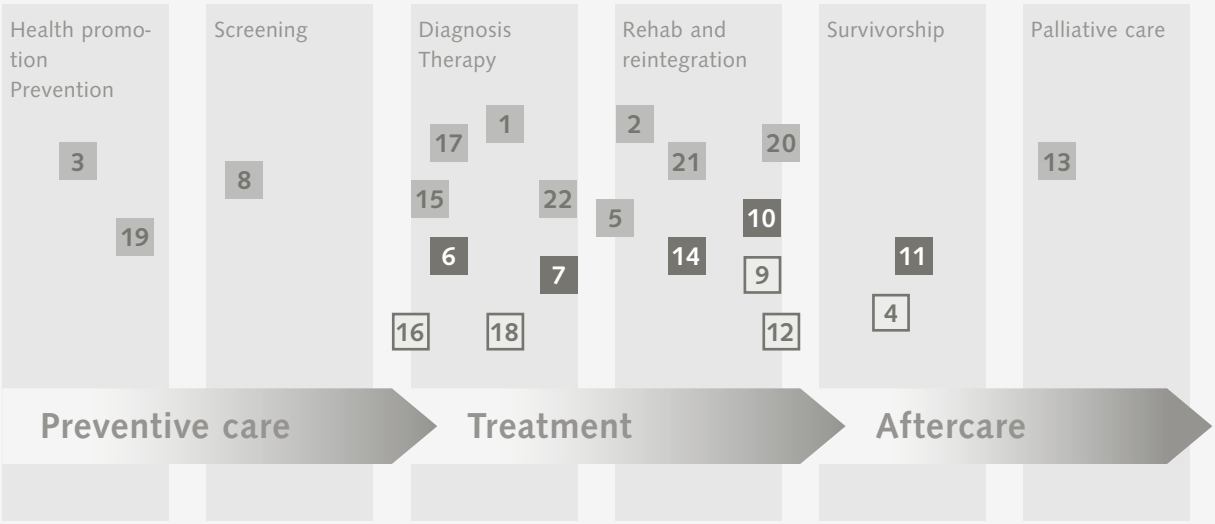
In 2019 the SCR issued a fourth call for grant applications for the Health Services Research in Oncology and Cancer Care programme. In the first three, already completed funding rounds, a total of 106 research proposals were submitted. The total funding requested by the applicants was nearly 16 million francs. In a two-step process, a panel of experts brought together for this programme evaluated the research proposals. The experts, who represent all relevant topic areas in health services research, rated all of the submitted research projects on their importance for oncological care, scientific quality and appropriateness of the chosen research methods, feasibility, and the applicants' previous scientific track record.

Up to the present time, the panel of experts has approved 22 grant applications with a total funding amount of somewhat more than three million francs (Table 1). Most of the projects funded were submitted by researchers working at hospitals and universities or universities of applied sciences but were also submitted by researchers at cancer registries, health insurance companies, and foundations. An initial analysis of the principal applicants' and co-applicants' fields of study and institutes shows that, as expected, the scientific disciplines represented are widely spread. In the area of clinical medicine, especially the fields medical oncology, radiation oncology, haematology, general internal medicine, and gynaecology are represented. In the area of non-clinical medicine, the main scientific discipline represented is public health. The group of other scientific disciplines is very heterogeneous: Represented here are the fields pharmacy, ethics, biostatistics, information technology, nursing sciences, economics, sociology, psychology, and information sciences.

Regarding the research topic, the funded research projects are spread across all levels (macro-, meso-, and microlevel) and across the entire patient (care) pathway (Figure 2). The patient pathway starts out at cancer prevention and describes the long pathway from diagnosis to treatment to palliative care or survivorship. As Figure 2 and Table 1 show, in the area of prevention, the funded research projects are studying

Figure 2
Health services research along the patient care pathway

The funded health services research projects, shown along the patient pathway and shown in colors indicating the three levels of health services research.



Macrolevel Health care system
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research questions on screening programmes and genetics tests. In the area of treatment, the research topics deal mainly with medical care and care quality, but health economics and legal aspects are also being examined. Four projects are investigating research questions that cross treatment and survivorship and have therefore been placed at the intersection. Important research topics in the area of aftercare are health services provision and the needs of persons who had childhood cancer.

The 22 research projects being funded are diverse and investigate important topics. The Health Services Research in Oncology and Cancer Care programme is thus underway in a very positive manner. Next year, researchers will have another opportunity to submit grant applications. It is not yet clear whether the funding programme will continue after its official duration outside of the National Strategy Against Cancer. However, it is certain that the SCR together with the Swiss Cancer League and other relevant actors will organize a community-building conference. The aim of the meeting will be to promote collaboration between researchers in health services research in Switzerland and in this way to strengthen health services research in Switzerland on a long-term basis.

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